

REMARKS

In response to the restriction/election requirement imposed by the Examiner in the Office Action, applicants hereby elect the species as in Figure 1A, claims 1-8, 19-21, 28 and 32-41 with traverse.

The Examiner stated that “The species...do not relate to a single inventive concept... the shared special technical feature...is not a special technical feature as it does not make a contribution over the prior art in view of EP 10005595, Merrill (USPN 5,965,875), and JP 07-028136, and SU1689768.”(Office Action, p. 3).

Applicants submit that the devices and methods of claims 1-41 relate to a junction field effect transistor (“JFET”) or JFET-derived structures. This means that the devices and methods as recited in claims 1-41 rely on photoconductivity to detect incident wavelengths. This is not taught in Merrill or the other cited documents. Although the triple junction of Merrill’s device is similar to the present invention, each semiconductor region has only a single contact, hence clearly there is no JFET structure or operation. In other words, Merrill’s device uses 3 junctions at different depths, each for a basic color. In the present invention, as recited in claims 1-41, instead of using 3 junctions, a junction-semiconductor channel-junction structure is used. Hence, the present invention, as recited in claims 1-41, is more compact and simpler than Merrill’s since the invention makes a 3rd junction unnecessary.

As a consequence of the above, color detection in the JFET structure(s), as recited in claims 1-41, relies not only on junctions, but also on current flowing through the middle layer which forms a channel for such a current flow (when applying corresponding source & drain biases at its ends). In contrast, the cited documents do not use or mention this effect, they operate simply as photodiodes, each located at a different depth. Additionally, the Japanese patent JP 07-

038136-A (probably wrongly referred to as JP 07-028136) uses different materials of different band gaps for each region so that the junctions between them become in effect heterojunctions, not homojunctions, in which no band gap engineering is used or mentioned.

Upon allowance of a generic claim, applicants reserve the right to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141.

Applicants reserve the right to file one or more divisional patent applications.

If the Examiner believes a telephone interview would expedite the prosecution of this application, the Examiner is invited to contact undersigned at (408) 720-8300. If there are any additional charges, please charge them to Deposit Account No. 022666.

Respectfully submitted,

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Date: April 5, 2010

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